

What is claimed is:

1. A thermoplastic polyurethane, obtainable by reacting
 - a) isocyanates with
 - b) chain extenders and
 - c) polymer polyols, said polymer polyol being prepared using a difunctional polyether polyol having exclusively primary OH groups and a molecular weight of from 500 to 2000 as a carrier polyol, and
 - d) if appropriate, polyols having a molecular weight of from 400 to 3000 g/mol and an average functionality of from 1.8 to 2.3.
- 10 2. The polyurethane according to claim 1, wherein the polymer polyol (c) is prepared using polytetrahydrofuran as the carrier polyol.
- 15 3. The polyurethane according to claim 1 or 2, wherein the polymer polyol (c), in addition to the carrier polyol, comprises a solids content, said solids content comprising acrylonitrile, styrene and macromer, and the proportion of acrylonitrile being from 10 to 50% by weight, the proportion of styrene from 30 to 90% by weight and the proportion of macromer from 1 to 10% by weight, based on the 20 total weight of the solids content of the polymer polyol (c).
4. The polyurethane according to any of claims 1 to 3, wherein the polymer polyol (c) has a solids content of from 20 to 50% by weight, based on the total weight of the polymer polyol.
- 25 5. The polyurethane according to any of claims 1 to 4, wherein the polymer polyol (c) is used in an amount of from 30 to 75% by weight, based on the total weight of the thermoplastic polyurethane.
- 30 6. The polyurethane according to any of claims 1 to 5, wherein the reaction is carried out at an isocyanate index of from 1005 to 1025.
7. The polyurethane according to any of claims 1 to 6, which is contact-transparent.
- 35 8. A process for producing thermoplastic polyurethane by reacting
 - a) isocyanates with
 - b) chain extenders and
 - c) polymer polyols, said polymer polyol being prepared using a difunctional polyether polyol having exclusively primary OH groups and a molecular weight of from 500 to 2000 as a carrier polyol, and
 - 40 d) if appropriate, a polyol having a molecular weight of from 400 to 3000 g/mol and an average functionality of from 1.8 to 2.3.

9. The use of the thermoplastic polyurethane according to any of claims 1 to 7 for producing films, cable sheaths or injection moldings.
- 5 10. A ski comprising thermoplastic polyurethanes according to any of claims 1 to 7.